

CLAIMS:

1. A method of producing a soya bean product, the method including the step of exposing soya beans to an acidic aqueous solution.

2. A method as claimed in Claim 1, in which the acidic aqueous solution has a pH of between about 2,0 and 5,5.

3. A method as claimed in Claim 1, in which the soya beans are whole beans.

4. A method as claimed in Claim 1, which includes the prior step of dissolving an organic acid in water to produce the aqueous acidic solution.

5. A method as claimed in Claim 4, in which the organic acid is citric acid.

6. A method as claimed in Claim 4, which includes the step of dissolving a sugar in the water.

7. A method as claimed in Claim 6, which includes the prior step of combining the organic acid and the sugar to form an additive and dissolving the additive in the water.

5 8. A method as claimed in Claim 6, in which the sugar is selected from dextrose, glucose and sucrose.

9. A method as claimed in Claim 1, in which the soya beans are exposed to the acidic aqueous solution by soaking the beans in the acidic
10 aqueous solution for a period of between about 4 and 12 hours.

10. A method as claimed in Claim 1, in which the soya beans are exposed to the acidic aqueous solution by soaking the beans in the acidic aqueous solution at a temperature of between about 2 and 16°C.

15 11. A method as claimed in Claim 6, in which the mass ratio of the organic acid to the sugar in the acidic aqueous solution is between about 100 : 0 and 1 : 1.

20 12. A method as claimed in Claim 11, in which the mass ratio is about 1:1.

13. A method as claimed in Claim 9, in which the mass ratio of the combined organic acid and sugar to the soya beans is between about 0,1 : 100 and 2 : 100.

5 14. A method as claimed in Claim 9, which includes the further step of separating the soya beans from the aqueous solution and then blanching the separated beans.

10 15. A method as claimed in Claim 14, in which the blanching step is conducted at a temperature of between about 95 and 100°C.

16. A method as claimed in Claim 14, in which the blanching step is conducted for a period of between about 2 and 6 minutes.

15 17. A method as claimed in Claim 14, which includes the step of milling the blanched soya beans to produce a slurry comprising a soya milk fraction and a soya solids fraction and separating the soya milk fraction from the soya solids fraction.

20 18. A method as claimed in Claim 17, in which the milling step is a wet milling step.

19. A method as claimed in Claim 18, in which the wet milling step is conducted at a temperature of between about 65 and 98°C.

20. A method as claimed in Claim 17, in which the time interval between each of the successive steps of soaking, separating, blanching and milling is between about 15 and 30 minutes.

21. A method of producing a soya bean product by processing soya beans, the method including the step of at least partially decreasing the biological activity of oxidizing enzymes in the soya beans.

22. A method as claimed in Claim 21, in which the soya beans have hulls and in which the oxidising enzymes are largely contained in the hulls.

23. A method as claimed in Claim 21, in which the enzymes are lipoxygenase enzymes.

24. A method as claimed in Claim 21, in which the biological activity of the oxidizing enzymes is at least partially decreased by exposing the soya beans to an acidic aqueous solution.

25. A method as claimed in Claim 24, in which the acidic aqueous solution has a pH of between about 2,0 and 5,5.

26. A method as claimed in Claim 24, which includes the prior step of
5 dissolving an organic acid in water to produce the aqueous acidic solution.

27. A method as claimed in Claim 26, in which the organic acid is citric acid.

10 28. A method as claimed in Claim 26, which includes the step of dissolving a sugar in the water.

15 29. A method as claimed in Claim 28, which includes the prior step of combining the organic acid and the sugar to form an additive and dissolving the additive in the water.

30. A method as claimed in Claim 28, in which the sugar is selected from dextrose, glucose and sucrose.

20 31. A method as claimed in Claim 24, in which the soya beans are exposed to the acidic aqueous solution by soaking the beans in the acidic aqueous solution for a period of between about 4 and 12 hours.

32. A method as claimed in Claim 24, in which the soya beans are exposed to the acidic aqueous solution by soaking the beans in the acidic aqueous solution at a temperature of between about 2 and 16°C.

5 33. A method as claimed in Claim 28, in which the mass ratio of the organic acid to the sugar in the acidic aqueous solution is between about 100 : 0 and 1 : 1.

10 34. A method as claimed in Claim 33, in which the mass ratio is about 1:1.

35. A method as claimed in Claim 28, in which the mass ratio of the combined organic acid and sugar to the soya beans is between about 0,1 : 100 and 2 : 100.

15 36. A method as claimed in Claim 31, which includes the further step of separating the soya beans from the aqueous solution and then blanching the separated beans.

20 37. A method as claimed in Claim 36, in which the blanching step is conducted at a temperature of between about 95 and 100°C.

38. A method as claimed in Claim 36, in which the blanching step is conducted for a period of between about 2 and 6 minutes.

39. A method as claimed in Claim 36, which includes the step of
5 milling the blanched soya beans to produce a slurry comprising a soya milk fraction and a soya solids fraction and separating the soya milk fraction from the soya solids fraction.

40. A method as claimed in Claim 39, in which the milling step is a
10 wet milling step.

41. A method as claimed in Claim 40, in which the wet milling step is conducted at a temperature of between about 65 and 98°C.

42. A method as claimed in Claim 39, in which the time interval
15 between each of the successive steps of soaking, separating, blanching and milling is between about 15 and 30 minutes.

43. A method as claimed in Claim 17, which includes spray-drying the
20 soya milk to produce a spray-dried powder.

44. A method as claimed in Claim 39 which includes spray-drying the soya milk to produce a spray-dried powder.

45. A soya bean product produced in accordance with a method as claimed in Claim 1.

46. A soya bean product produced in accordance with a method as claimed in Claim 21.

47. An additive comprising an organic acid and a sugar for use in a method as claimed in Claim 7.

48. An additive comprising an organic acid and a sugar for use in a method as claimed in Claim 29.